1342

QC

Quality Control

Memo

NCR:	Yes	s / No				WORK ORDER NON-O	CON	IFORM	MANCE / UPI	DATE	QA Closed:	Date:	
Work O	rder:					DISPOSITION				AGAINST DI	EPARTMENT,		
Pa	t No.					Rework Scrap		ı	Skid-tube Machining	Crosstube Small Fab	4	Water Jet	Engineering Quality
NC	R No					Use-as-is Work Order Update]		noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Descri	ption of work order update	li	nitial	Act	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Chi	ief Eng	Descr	ription	Date	Verification	QC Inspector
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quip/Tooli	ng	4	ļ										
perator	<u> </u>	4											
/laterial	` 	4											
etup	<u> </u>	4											
Other	<u> </u>	4					İ						
rocess	-	.]											
upplier	<u> </u>	-											·
raining		4											
Inapprove	<u> </u>	<u> </u>	i				ALIE	T CATE	L		<u> </u>		
130	ding	Gear			 	General	AUL	CAIL	JORT				
Lai		Bending		,		Bend	П	Grain		. [Ovalized		Pressure/Forced
	\vdash	Centre No	nt Conce	ntric to		BOM/Route	\vdash	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	-	Cracks	or conce	incre to	~, ₃ -	Broken/Damaged	\vdash		on incomplete	-	Part Incorred	· · · · · · · · · · · · · · · · · · ·	Weld
	\vdash	Crushed/	Crimped		<u> </u>	Burrs	-		ions Incomplete/U	Jnclear	Part Lost/Mi		Wrong Stock Pulled
	\vdash	Cuffs	ороз			Contamination	\vdash	Mainte	•		Part Moved	· _	_
		Heat Trea	ət			Countersink	-	Mislabe			Positioned V	Vrong	
		Inspection		Tube	T	Cut Too Short	_	Misread		,	Power Loss/	_	Other
		Ripples in				Drill Holes	\vdash	Offset			-		
		Torque W		Extrusio	,	Drawing	\mathbf{H}	1	Calibration				
		Turning S				Finish		Out of S	Sequence		***		
.		Wave/Tw	•			Folio			Dimensions				

DQA:

Date:

Work Orde		509		*985	<u> </u>						Page 2
Revision ID:	D2012-117			Accept	*N9000	40100)*	Setup	Start Stop	IVI	\$1* \$0*
	Clevis 3/11/13 3/21/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*	÷	Cust Item ID: Customer:					*N5	ヘン "
Approvals:	Process Pla	in:	Date:	Tooling: SPC (Y/N):	Date:	:		Run	Start Stop	*NF	R1* R2*
Sequence ID/ Work Center II 130 *130*)	Operation Description NC BRAKE		Set Up/ Run Hours 0.00	Tool ID	Tool # Plan Code	Accep Qty	Qty		Number	Insp. Stamp
Brake NC Brake NC		Memo Form on pres	ss using DT8242 as per Dv	0.00 wg D2012-117			_~_				13:21
140 *140* QC Quality Control		QC5- Inspect part comple	eteness to step on W/O	0.00 3.4.	3		30				-
150 *150* Packaging Packaging		Identify as per dwg & Sto	ock Location:	0.00				19] 3/4/	/3 (1	0

											DQA:	Dat	te:	•	
NCR:	Yes	/ No				WORK ORDER NON-C	CON	FORN	MANCE / UPDAT		OA Clasade	 Dat	٠	<u> </u>	
						DICROCITION	Т	.			QA Closed:		ie.		-
Work Ord	ler:					DISPOSITION			A	GAINST DEI	PAKTIVIENT	PROCESS			
						Rework	1 I		Skid-tube Cr	osstube		Water Jet		Engineering	
Part	No.					Scrap	1	ľ	Machining Sr	mall Fab	Pro	d. Eng. Coor.		Quality	
						Use-as-is		Therm	oforming F	inishing	Rec/Stor	re/Packaging		Other	
NCR	No.	·				Work Order Update]		Large Fab Cor	mposite		Supplier			
Root					Descri	L ption of work order update	 in	itial	Action		Sign &		T		-
Cause		Date	Step	Qty	-	or Non-conformance		ef Eng	Description	n	Date	Verification	,	QC Inspector	
Doc/Data	T	<u> </u>	•			<u> </u>			· · · · · · · · · · · · · · · · · · ·						~
 Equip/Toolin	g	1						1							
Operator															
Material															
Setup															
Other												:			
Process]										:			
Supplier]													
Training							-								
Unapproved	L						<u> </u>		** ***						
						F.	AULT	CATE	GORY	, -,,					_
Land	ling	Gear			_	General	_				ı				
	L	Bending				Bend		Grain		I	Ovalized		_	Pressure/Forced	
	L	Centre No	t Concer	ntric to (o/s	BOM/Route	\vdash	lardwa			Over/Under	- t	_	Temperature/Cure	
	<u> </u>	Cracks				Broken/Damaged	_	•	on Incomplete	<u> </u>	Part Incorred	- F		Weld	
	\vdash	Crushed/0	Crimped		ļ	Burrs			ons Incomplete/Unclea		Part Lost/Mi	ssing [\	Wrong Stock Pulled	
	-	Cuffs			<u> </u>	Contamination	\mathbf{H}	Vlainte			Part Moved	_			
	-	Heat Trea			<u> </u>	Countersink	\mathbf{H}	Mislabe			Positioned W		 1.		
	\vdash	Inspection	-	Tube	<u> </u>	Cut Too Short	\vdash	∕lisread			Power Loss/:	Surge [Other	_
	\vdash	Ripples in		.	<u> </u>	Drill Holes	-	Offset	S. 191	,					_
	\vdash	Torque W			` <u> </u>	Drawing			alibration	•					_
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H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord March-12-13 1		509		*985	509*						Page 3
Item ID: Revision ID: Item Name:	D2012-117 Clevis			Accept	*N900	040	100°	* s	etup Sta	I U	S1* S2*
Start Date: Required Date Reference:	3/11/13 : 3/21/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item I Customer:	D:					
Approvals:	Process Pla	nn:	Date:	Tooling: _ SPC (Y/N):		ate: ate:		R	tun Sta Sto		R1* R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#		Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*160 *160* QC		QC21- Final Inspection -	Work Order Release	0.00					131	4/30	

Quality Control

R 13-04-3

												DQA:	Da	ate:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	MANCE / UPI	DATE		•		•	
											(QA Closed:	Da	ite:	
Work Or	ler:					DISPOSITION				AGAINST DI	ΕP	PARTMENT	PROCESS		
Part NCR	•					Rework Scrap Use-as-is Work Order Update		Machining Small Fab Thermoforming Finishing		Crosstube Small Fab Finishing Composite	Prod. Eng. Co Rec/Store/Packag		-		Engineering Quality Other
Root					Descri	ption of work order update	П	nitial	Act	ion	T	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription		Date	Verification	n	QC Inspector
Doc/Data											Ī				
Equip/Tooling	3 🔲						ĺ				١				
Operator											1				
Material											ł				
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Other															
Process															
Supplier															
Training			1												
Unapproved															
						F.	AUL	T CATE	GORY						
Land	ling G	iear				General		_							
		Bending				Bend		Grain](Ovalized			Pressure/Forced
ĺ		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re](Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete](Part Incorrec	t		Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/l	Jnclear]۱	Part Lost/Mis	ssing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		71	Part Moved			
1		Heat Trea	at			Countersink		Mislabe	led		٦	Positioned W	rong/		
	П	Inspectio	n Strip in	Tube		Cut Too Short		Misread	1		٦	Power Loss/S	Surge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

Page 1

Work Order ID:

98509

Parent Item:

D2012-117

Parent Item Name:

Clevis

Start Date: 3/11/13

Required Date: 3/21/13

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP: C 99.06.16Re-format, Now Laser CutDM IPP Rev.D. Now on Waterlet 07-03-20. II M

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			100	sf	567.8630	0.0137	0.288422	1	13.04	oà.
				Location		Loc Qty	Lo	c Code					
				MAT020		567.863							
				1222	45	5.156							
				1231	36	140.8							
				1244	28	101.907				···			
				1245	72	320							

											DQA:	Date:	í
NCR:	Yes	s / No				WORK ORDER NON-	CON	IFORM	/ANCE / UP	PDATE			
									-		QA Closed:	Date:	
Work Or	der:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
						Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Par	t No	·		ś		Scrap] [ſ	Machining	Small Fab	_	d. Eng. Coor.	Quality
						Use-as-is	┧┃		noforming	Finishing	Rec/Sto	re/Packaging	Other
NCF	R No	•				Work Order Update	┚┃		Large Fab	Composite		Supplier	J LJ
Root					Descri	ption of work order update	- Ir	nitial	Ad	ction	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Chi	ef Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data	L	4											
quip/Tooli	ng	1											
Operator	\perp	_}											
Material	<u> </u>	4											
Setup	\perp	4											
Other	\vdash	4					1						
Process	\vdash	4		1 1			1						
Supplier	L	4			•		-						
raining	\vdash	4			•								
Jnapprovéd	1	<u> </u>	<u> </u>					T CATE	CORY			<u> </u>	
•		<u> </u>				General	AUL	T CATE	JURY				
Lan	aing	Gear Bending				Bend		Grain		Г	Ovalized		Pressure/Forced
	\vdash	Centre No	ot Concor	atric to C	\s	BOM/Route	\vdash	Hardwa	re	<u> </u> -	Over/Under	tolerance	Temperature/Cure
	\vdash	Cracks	or concer	itile to c	″³	Broken/Damaged	-		on Incomplete	<u> </u>	Part Incorred		Weld
-	-	Crushed/	Crimned		\vdash	Burrs	\vdash	-	ions Incomplete,	/Unclear	Part Lost/Mi	<u> </u>	Wrong Stock Pulled
-	\vdash	Cuffs	Спарса			Contamination	-	Mainte	•		Part Moved]
	 	Heat Trea	at			Countersink	-	Mislabe		F	Positioned V	Vrong	
ļ	\vdash	Inspectio		Tube		Cut Too Short	\vdash	Misread		<u> </u>	Power Loss/		Other
}	一	Ripples in	-			Drill Holes	-	Offset		L	·		<u> </u>
	\vdash	Torque V		xtrusion		Drawing			Calibration				
ľ		Turning S				Finish	\vdash		equence				-
	<u> </u>	Wave/Tw				Folio	-		Dimensions				

DART AEROSPACE LTD	Work Order:	98589
Description: Clevis	Part Number:	D2012-117
Inspection Dwg: D2012-117 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First A	Article	Prototype
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Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
+0.005/-0.001	0.196	./		V	Ned-01
+0.006/-0.001		V		V	
+/-0.010		V		V	
+/-0.010		V		✓	
+/-0.010		V		V	
+/-0.010		1		V	
+/-0.010		V		V	
+/-0.010				V	
	``				
	+0.005/-0.001 +0.006/-0.001 +/-0.010 +/-0.010 +/-0.010 +/-0.010 +/-0.010	Tolerance Dimension +0.005/-0.001	Tolerance Dimension Accept +0.005/-0.001	Tolerance Dimension Accept Reject +0.005/-0.001 0. /96 / +0.006/-0.001 0.25.7 / +/-0.010 0.38/ / +/-0.010 0.380 / +/-0.010 1.326 / +/-0.010 2. 6499 / +/-0.010 0.05.9 /	Tolerance Dimension

			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
Measured by:	Mul	Audited by:	<b>5.6</b>	Prototype Approval:	N/A	•
Date:	13.04.02	Date:	13.42	Date:	N/A	_

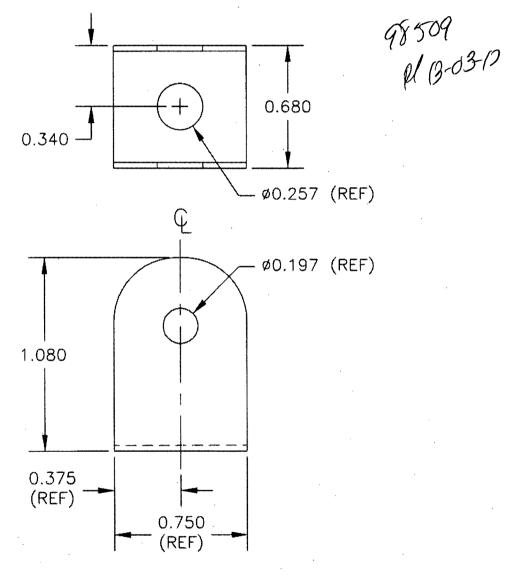
Rev	Date	Change	Revised by	Approved
Α	09.09.29	New Issue	KJ	



DESIGN		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
CHECK	ED E	APPROVED	DRAWING NO. D2012-117		SHEET	REV. 1 OF	-
DATE			TITLE	**************************************	······································	SCA	LE
99.05.05		CLEVIS			:	2;1	
Α		94.10.27	NEW ISSUE				

RELEASED

 00.0	0.00	OLC 110
Α	94.10.27	NEW ISSUE
В	94.10.27	CHANGED HOLE SIZE, WAS D2012-107
С	99.05.05	ADD FLAT PATTERN

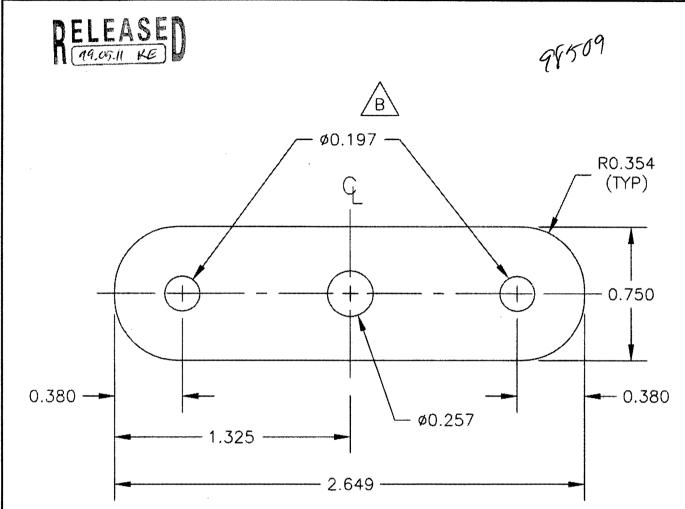


MATERIAL: AISI 304/316 SS 0.063 THICK USE 0.032 BEND RADIUS TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES





	DESIGN	DRAWN BY		SPACE LTD Ontario, canada
	CHECKED	APPROVED #	D2012-117	REV. C SHEET 2 OF 2
	DATE		TITLE	SCALE
	99.05.05		CLEVIS	2:1



D2012-117 FLAT PATTERN

MATERIAL: AISI 304/316 SS 0.063 THICK TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES